

REMARKS

In response to the Official Action mailed on April 6, 2005, the application has been amended. No new matter has been added. Reconsideration of the rejections of the claims is respectfully requested in view of the above amendments and the following remarks.

Page 2 of the Official Action states that the Information Disclosure Statement filed on December 30, 2003 failed to comply with 37 CFR 1.98(a)(2) for failing to include a copy of the reference identified as AP (JP 11 277290). A review by the Applicants of the electronic file wrapper of the present application confirmed that the Applicants did in fact submit a copy of reference AP as part of the Information Disclosure Statement and that the Information Disclosure Statement as filed was in compliance with 37 CFR 1.98. The problem appears to be that in the course of scanning reference AP into the electronic file wrapper, the PTO failed to store this reference as a separate electronic document but instead scanned it as part of another foreign reference. As a result, a copy of reference AP is found in the electronic file wrapper of the present application as page 2 of the foreign reference EP 0847829A1, which was submitted as reference AK in the same Information Disclosure Statement. The Examiner is invited to review the copy of reference AP found mixed together with reference AK in the electronic file wrapper.

On pages 2 and 3 of the Official Action, claims 1 - 9 received the following rejections:

(a) Claims 1, 3, and 9 were rejected under 35 USC 102(b) as anticipated by JP 2000-015476.

(b) Claims 1, 2, and 9 were rejected under 35 USC 102(b) as anticipated by EP 1213089.

(c) Claims 2 and 4 - 8 were rejected under 35 USC 103 as unpatentable over JP 2000-015476.

(d) Claims 1 - 9 were rejected under 35 USC 103 as unpatentable over Domi et al (U.S. Patent No. 6,319,461) or Munekata et al (U.S. Publication No. 2003/0021718).

These rejections are respectfully traversed.

Amended claim 1 describes a lead-free solder alloy consisting of Ag, Ni, Co and/or at least one of P, Ge, and Ga, and a remainder of Sn. Amended claim 1 is supported by Table 1 on page 10 of the application as filed, which discloses various examples of alloys according to the present invention containing only those elements listed in amended claim 1. None of the cited references discloses or suggests such a composition.

JP 2000-0154776 discloses a lead-free solder containing Cu and Bi as essential elements.

EP 1213089 discloses a Sn-Ag-Cu based solder which includes Cu as an essential element.

Domi et al discloses a lead-free solder alloy containing Ti as an essential element.

Munekata et al discloses a lead-free solder alloy for use in flow soldering containing Cu as an essential element.

It can be seen that each of the cited references requires at least one element which is excluded from the composition described by amended claim 1, so they do not teach or suggest the claimed composition. As such, the cited references cannot anticipate amended claim 1 or render it obvious. Amended claim 1 and claims 2 - 9 which depend from it are therefore allowable.

On page 5 of the Official Action, claims 1 - 9 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as unpatentable over claims 12 - 31 of copending Application No. 10/666,129. This rejection is respectfully traversed.

Each of the claims in Application No. 10/666,129 requires 0.1 - 3 wt % Cu. As set forth above, none of amended claims 1 - 9 of the present application contains Cu. Since the Official Action has not cited any teachings that would suggest excluding Cu from the compositions described by claims 12 - 31 of Application No. 10/666,129, the compositions described by claim 1 - 9 of the present application cannot be obvious from claims 12 - 31 of Application No. 10/666,129. Claims 1 - 9 of the present application are therefore allowable.

New claims 10 - 12 describe additional features of the present invention and are allowable as depending from claim 1. Claims 2 - 4 have also been amended to remove redundant language. The amendments to claims 2 - 4 are unrelated to matters of patentability and are merely for the purpose of removing descriptions of features which are inherently present in these

claims by their dependence from claim 1.

In light of the foregoing remarks, it is believed that the present application is in condition for allowance. Favorable consideration is respectfully requested.

Respectfully submitted,

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